THE POULTRY MESSENGER
& WESTERN FRUIT-GROWER.

Vol. 1. AURELIA, IOWA, MARCH, 1895. No. 1.

SAMPLE COPY.

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The best of everything in the line of nursery stock at

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I am prepared to fill orders for fruit trees in any amount, blackberry raspberry and strawberry plants,

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A Good Hatch,

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The above is the title of a little 16-page pamphlet of a suitable size for enclosing in an envelope. Every breeder who sells eggs for hatching purposes needs it. It anticipates many of the complaints which are received by this class of poultrymen. The book is simply a talk with those who purchase eggs about what they can reasonably expect in the way of a hatch. By sending out one of them with each shipment of eggs breeders will save themselves much correspondence, and an endless repetition of explanations regarding the small imperfections which will crop out in the best of stock. Those who have lately received a package of them say:

"I think they are just the thing for every poultryman."

"I would not be without them for double what they cost."

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Paragon Black Langshans

Eggs $2 per sitting of thirteen.
Two sittings for $3

From the Choicest Breeding Stock.

A. L. BELEW, Aurelia, Iowa.

BUFF WYANDOTTES,

—AND—

White-Crested Black Polish

I have some very fine, vigorous fowls of these two grand breeds, mated for best results. Orders booked now for eggs at following prices:

Buff Wyandottes.	W. C. Black Polish,
1 Sitting, $2.00; 3 Sittings, $4.00.	1 Sitting, $1,50; 3 Sittings, $3.50.

One Sitting of each breed $3.00. Orders filled in rotation as received, and shipped as soon as weather will permit. P. D. WINE, Aurelia, Iowa.

PERFECTION BLACK RASPBERRY.

The latest and finest raspberry out. Picked in fruit the past season over $20 to the row on yearling vines. Gregg, Palmer, and other varieties produced less than $5 to the row, same length and age. Very early, sold for 5c. per quart more than later varieties. Perfectly hardy, immensely productive; stood drouth and cold the past two seasons when all old sorts failed. To get them thoroughly introduced I offer them delivered to you for $1 a dozen. Try a few. Send for my price list of all leading small fruits, novelties and ornamentals.

20 Varieties of Seed Potatoes

At low prices. An early order will secure Perfection raspberries—they are limited. Everything first-class and low prices. Strawberry, raspberry and blackberry plants a specialty. Mention Messenger when writing.

A. J. NORRIS, Cedar Falls, Iowa.

Barred Plymouth Rocks,

AND

POLAND-CHINA SWINE.

For fine appearance, vigor and all the best qualities of the Plymouth Rocks, I believe my flock is the equal of any. I keep Plymouth Rocks exclusively, and have been a breeder of them for ten years. Eggs $1.25 per sitting; two sittings for $1.75.

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Twenty choice gilts for sale sired by Hatfield's Choice 19771 he by Black U. S. 18345. Gilts bred to either of the following boars: U. S. Directum and Dandy Directum sired by Directum 23847 or Sensation C sired by Sensation F 23111. T. C. CREPPS, Aurelia, Iowa.

Standard Buff Leghorns.

I want every person interested in this popular and beautiful breed to send for our large 4-paged '95 circular, free, stamp accepted. I have one of the finest flocks and prize winners, scoring 94½ by Felch to 93½ by Drevenstedt. Also,

Black Javas, and Columbian Wyandottes.

Get my circular sure

GEO. S. BARNES,
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FOR SALE!

30 Plymouth Rocks

Which I will sell cheap for the next 30 days with score card. I also breed DUROC JERSEY HOGS.

I have a few fall pigs which will be ready to ship next may,

DAVID NAUMAN, West Liberty, Iowa.

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NOT A FORTUNE MAKING BUSINESS.

It is a cruel wrong to induce people to engage in poultry-keeping as a business by misrepresentations regarding the profits of such an employment. Hundreds of people have in this way been led into giving up a fairly paying occupation with a view to improving their condition by means of poultry-keeping on a more or less extensive scale. Soon after investing all that they possessed in an establishment suited to their purpose, they were made painfully aware of the fact that they had been grossly deceived about the income to be derived from such a business.

He who is looking about him for some means of making a large amount of money had better not select poultry-keeping for doing it. When properly carried on it will yield a reasonable return for the time and labor expended, and that is all there is to it. It is true that some people have managed to make a large amount of money out of the chicken business, and we hear it said that some large fortunes have been acquired in that way. But such cases are exceptional. These people undoubtedly possessed business talents above the common order, and the results would have been pretty much the same if their energies had been directed in any other channel. Their success was not due to easy modes of money making afforded by the poultry business. Beginners are getting on dangerous ground when they begin to calculate the probable extent of their own success by such examples as these.

We have no definite means of finding out what proportion of those who engage in poultry-keeping as a business make a failure of it. We are certain, however, that it proves a money-losing venture to more than half of those who do so. In spite of the warnings of the journals, and the advice of those who have devoted many years of their life to the pursuit, people are continually rushing into this business without the practical knowledge necessary for carrying it on successfully. They have read the books and papers until they have become "chicken crazy," and they seem to view the subject with less discretion and good sense than they would exercise in dealing with any other matter. They hear of what has been accomplished by poultrymen of long experience, and can see no reason why by following directions laid down by reputable writers on poultry topics they cannot attain results closely approximating those of the most successful breeders. No beginner can do this. No beginner can make anything like an approach to the success which is regularly attained by these trained breeders. The directions which are to be his only reliance at the start, can be nothing more than general in their character. The beginner will be almost daily confronted with conditions which are new to him. No one else has had an experience exactly like it, and, therefore, the circumstances with which he finds himself compelled to deal have not been treated in the journals.

And yet poultry-keeping is profitable if one understands how to do it. The necessary experience need not be costly either, if he is not in too much of a hurry, and is content to obtain it by keeping a small flock until he has learned enough to successfully manage a large one. He must have some other means of a livelihood while he is getting his education, and even after the lesson is well learned, the majority of people will find that they will do better by combining their poultry-keeping with some other business. It is generally conceded that it can be carried on in connection with fruit-growing with more advantage than anything else. Hundreds and thousands of people are making a good living in this way. It is an employment which does not call for much capital, and any one can succeed at it who can succeed at anything requiring average intelligence, perseverance and industry.

No one shall truthfully charge the MESSENGER with being responsible for his misfortunes on account of having exaggerated the profits to be derived from a pursuit of this kind. It does not want to deceive or mislead, and drops this word of caution at the very outstart in order to make known its views in this particular, and as an outline of the general tenor of its course in the future.

NOT GOOD ADVICE.

The rule which we often see in print to "feed the fowls all they will eat up clean," is a very unsafe one to follow. If this is done the fowls will gorge themselves with food, and in a little while will be fit for nothing except for market. Ascertain just what is required to keep them in thrifty condition without laying on fat, and give them that and no more. When the food is all eaten the fowls will appear just as hungry as before it was given to them. But for all that, if your judgment has been right in regard to the allowance, they have had enough. Be proof against all their begging for more. You are keeping poultry for profit. You have comfortable quarters and good stock, and are in every way fairly well prepared to make a success of it. Don't spoil it all now by overfeeding. We do not think we exaggerate the matter when we say that an oversupply of food, particularly food of a concentrated nature, is the cause of more disappointment and trouble in the poultry yard than any other one thing which could be named.

Don't waste your time on scrubs. That they are better in any particular than full bloods is wholly a mistaken idea. When we speak of full bloods in this connection we have reference only to those breeds of tried and proven merit.

Subdue Your Temper.—No hasty-tempered, excitable person is ever the owner of quiet, docile poultry. Such a person, in fact, should not be the owner of poultry of any kind.

THEY KEEP TOO MANY KINDS.

Beginners in poultry-keeping are liable to fall into the mistake of keeping too many breeds. On many accounts it is best for such persons to confine themselves to one breed, at least until they have accumulated experience enough to properly look after more. They may safely calculate that it will take more than one or two seasons for them to do this.

It is contended by some of the authorities that no breeder can do full justice to more than from three to five breeds at the same time, no matter what the length of his experience in that line. Some people will not order eggs or stock from breeders who undertake more than this. The large poultry farms where all the standard breeds are reared, get no patronage from this class. They claim that no one individual can produce so many different types and attain a high degree of excellence in all of them. However that may be, it is a fact conceded by everybody who has any knowledge whatever of poultry-keeping, that those who are new to this kind of work go contrary to their interests when they take upon themselves the task of caring for a half dozen or more breeds. The various types are nice to look at in the summer, and the attentions which they then require will not make it any more burdensome to the owner than if they were all of the same kind. But when winter has arrived, and the different lots must be furnished quarters to themselves, and each lot must have treatment in some particulars different from that given to all the others, the owner will discover that he has taken a big contract on his hands. And during some cold, stormy period he will persuade himself that he has a little more than he can manage, and he will become slack and careless in his attentions. Disappointments and disasters come on rapidly after this, and ere long our friend gives it up and thereafter counts one more in the ranks of those who have found out that the poultry business is a delusion and a snare.

It takes time, and patience, and study for one to become familiar enough with the ins and outs of poultry-keeping to enable him to calculate with reasonable certainty upon definite results one year with another. It is bad policy for one who has all this to learn to needlessly add to the difficulties of the task before him. Probably he could find no surer way of doing this than in trying to look after three or four breeds before he has got far enough along to properly care for one.

POULTRY ON THE FARM.

The value of the farm poultry is becoming better understood and appreciated than formerly. The chickens used to be looked upon as a necessary nuisance, and were treated accordingly. They were simply tolerated on the farm as something which everybody wished to be rid of, but which they could not very well do without. Any sort of an old rattle-trap of a building was considered good enongh for the hens. In fact the hens could consider themselves pretty lucky if they had any building at all which they could claim as their own. It was thought that they could find all the shelter they needed on the warm side of the stables and sheds during the day, and the trees afforded them a lofty and airy roosting place at night. Who wanted to have any bother with the chickens anyway. Weren't they into everything on the place which they had no business to meddle with, and everybody knew that they never paid for half the stuff which they ate and destroyed.

But this manner of dealing with the poultry is being done away with, we might say has been entirely done away with on nearly all well conducted farms. One does not often see a farm now where it is the rule to provide good protection for the horses, cattle and hogs, and the chickens are not included. The location of the house may not be what it ought to be, and the plan upon which it is built decidedly faulty, but it gives ample protection to the fowls from cold and dampness, and is an evidence of the good intentions of the owner towards his flock. This gives the chickens a better chance to prove what they are worth. And in every instance where this is done they soon win a better opinion for themselves from the owner.

The old method, or rather the lack of method, in the management of the chickens was simply the effect of habit. It was so generally believed that they would not pay for anything different that it was thought a waste of time to be looking after the comfort of the chickens when there was always so much other work to be done from which better returns could be expected. But the fact gradually came to light that the powers of the chickens as money makers had been undervalued. It was found that in proportion to cost they were as profitable as any other kind of stock, if rightly treated. They hadn't been given a fair show.

A farmer is as ready as anybody to make the honest penny, and he is also just as quick to see the chance to do it. And sometimes he makes sure of the penny without troubling himself about the honesty part of it. When he discovered that the chickens could be made to pay their way and put money in his pocket besides, he resolved upon a new departure with respect to his feathered possessions. He gave them respectable quarters, looked more carefully after their feed, and set himself to work with a view to "catching on" to the secrets of the trade as practiced by those long accustomed to poultry management. And the outcome of all this is that a large per cent of farmers know a good deal about the poultry business. Many of them succeed in obtaining results not far behind those of the best specialists in this line. Pay a visit to any country or village store in mid-winter, and witness the quantity of eggs which has been brought in from the farms. This is all that is required to show that there are plenty of people on the farms who have a pretty correct idea about the winter management of poultry. It is not always the farmer himself who should have the credit for this. As often as not it is the work of other members of his household, generally of the "women folks," but no matter whose doings it is, it must be accepted as an evidence of advanced methods of poultry-keeping on the farm.

Many writers in the poultry papers find a fruitful theme in the alleged out-of-date and slip-shod ways of dealing with poultry on the farms. The idea is held out that this is an almost universal rule. These people do not know what they are talking about, and plainly have taken no pains to find out the truth. A drive of a dozen miles through any community of fairly well-to-do farmers will be enough to convince any one of observing habits that these statements are not in accordance with the facts.

No, this is not a taffy article, written for the purpose of winning favor in the eyes of farmers. There is not one farmer in ten thousand who cares a snap of the finger what we think or say about his way of treating his poultry. But much of what appears in print about the usual method of caring for the poultry on the farm is not the truth. And what is here written is the truth.

Fashion in Perches.—Lower the perches to within three feet of the ground, and be sure that they are placed on a level. Nothing will more surely betray you as a "back number" in the poultry business than for you to have your perches arranged in the old fashioned, step-ladder style.

DON'T WORRY ABOUT THE BREED

Many persons about to engage in the poultry business find it a difficult matter to come to a decision as to the breed which they shall begin with. They seem to think that the breed is a matter of first importance, and that the success or failure of the venture is wholly dependent upon the amount of wisdom which is brought to bear upon this point. The importance of the breed is generally over estimated. Any of the standard breeds are good enough to make it unnecessary for a man to waste any time about a selection. If he is adapted to the poultry business he can succeed with any of them. It is to be inferred, as a matter of course, that one who is comtemplating engaging extensively in poultry keeping is in possession of some general knowledge respecting the distinctive qualities of the most popular and best known breeds. If his object was to raise poultry for market, he would know that he did not want to keep the Leghorns. If it was his wish to keep the best layers, he would know that the Cochins and other heavy breeds were unsuited to his purpose. If he wanted what is usually described as a general purpose fowl—one combining the qualities of a good layer and a good table fowl—he could not go far astray in selecting any of the medium sized breeds. The Plymouth Rocks, the Wyandottes, the Langshans, all come under this head, and while poultrymen have their preference among them, they are all of the same class and about equally good. But the point which needs to be impressed upon persons who are halting and hesitating about the breed to which they shall devote their attention, is that it is the individual who keeps the breed, and not the breed itself, which determines the question of success or failure in the poultry yard. If he is fitted for the work he will attain the end which he has in view with any breed. Of course he will win success easier with some breeds than others, but he will be a dead failure with any if he is not of the right make up for a successful keeper of poultry. We do not mean to say that poultrymen are as poets are said to be, "born, not made," but we are ready to declare that the man who cannot or will not set himself to the task with the requisite energy, and train himself to habits of close observation and foresightedness, had better keep out of poultry keeping as a business. Let one make a start then in this direction with the breed most convenient to his hand. He will know which breed is best for him to keep by the time he has found out whether or not he is qualified to keep any at all.

DESTROY THE RUNTS.

If there is now a scrawny, stunted little pullet in your flock, but a trifle more than half as large as the other young hens of the same hatch—a specimen which you feel is hardly worth keeping, and yet a little too good to kill and throw away, you had better make up your mind at once to send her to the block. There is not one chance in twenty that she will outlive her infirmities and pay for the feed and care which she has received. Even though she should attain proper size and seemingly be in good health, she is not the kind of a fowl which a good poultryman would want to breed from, or even to serve on his table. But the probabilities are that instead of improving she will go the other way as the winter advances, and will at last become such an eyesore that you will be compelled to destroy her. The writer has just administered the hatchet treatment to several Light Brahma pullets of this description whose sorry appearance has long distressed him, but which he believed he could make into respectable looking hens by giving them extra good attention. He will not make that kind of a mistake again. Such fowls, besides being utterly worthless, are more subject to fatal diseases than healthy ones, and are liable to spread contagion through the whole flock. The safest and the most merciful thing to do with them is to kill them.

THE HENS PAY FOR GOOD TREATMENT.

It pays to treat hens with kindness. It pays in good hard cash. A coop of hens which show signs of fright every time the owner comes among them is never a very profitable one, it matters not how good the attention they receive in the way of feed and shelter. We like to see the fowls gather about the feet of the keeper when he enters the pen or yard, and encumber his steps so that he can hardly walk. It is proof that he has not abused them. And they make it right with him for this good treatment by an increased number of eggs. Now some one who reads this will set it down as all nonsense, and declare that there is nothing in it. We wish we could persuade all such smart people to make a test of it as an experiment. All old poultry-keepers know that there is truth in it.

Doctor quickly, or else kill.

BUY A STRAW CHOPPER.

Every poultryman who has a hundred hens or more ought to own a straw chopper. It can be put to such a variety of uses, and is such a convenience for reducing bulky stuff to a suitable state for the poultry yard, that a person who has once had one about could not easily be persuaded to do without it. The principal idea which the poultry-keeper has in mind in buying himself a chopper is the preparation of the clover now so generally employed as an important part of the ration for the chickens. But the chopper will come handy in many ways not thought of by the purchaser when first obtained. In late spring and summer, when the fowls are yarded, as they must be if different kinds are kept, it is just the thing for chopping up the grass and other green stuff so needful to the health, and so eagerly sought after by the imprisoned birds. It is only the matter of a moment to thus reduce grass to lengths whereby it may be much more to the fowls' fancy than if thrown into the yards as it comes from the lawn. The chopper will come handy, too, in preparing the material for the nest boxes. We have never found anything better for this purpose than clean oats straw cut into inch lengths. It is no where near so good if used as it comes from the threshing machine. With a common hand straw chopper a man can chop up enough of it in ten minutes to furnish the nest boxes for a hundred hens. The scratching pen, or if there is no such place, then the floor of the poultry house, should be covered with several inches of loose litter, in winter at least. In the absence of chaff, which is not always to be had in the right condition for the purpose, here the chopper will again come into play. It short, it is an implement for which the poultryman will find almost daily use. They are not costly, either, unless a person should take a fancy to one of the complicated sort. A low priced, serviceable machine can be had for a few dollars, and the money required to obtain it will be counted as well expended.

Your Way is the Best Way.—If you are having a reasonable degree of success in your present methods of handling your chickens, don't change your methods for those of any one else. The results are the important thing, and so long as they are satisfactory, it is a matter of no consequence how they are reached. Any one at all adapted to the poultry business will succeed better with his own methods than those of other people.

LET IN THE FRESH AIR.

People who keep poultry need to know that there is such a thing as having the poultry house too warm even in winter. They have been told so often that success is out of the question unless the fowls are provided with warm quarters that many of them have come to regard warmth as the one thing needful, and to think that there cannot be too much of it. And so the poultry house is made close and tight, without a crack or a crevice anywhere through which a draught of air could find its way to the interior. This is well and proper, and is exactly the sort of a house which every poultryman should have if he lives where his flock would be exposed to the rigors of a northern climate. The house should be built so as to keep the fowls comfortably warm in the severest weather.

But it must be borne in mind that all the days of winter are not freezing cold even in the north. And on such days the doors and windows should be thrown wide open and kept open as long as there is no actual danger of severely chilling the fowls. It is frequently the case too that the wind is blowing bitter cold from the north or northwest, while the bright sunshine is making it agreeably warm on the south side of the buildings. It should be made the rule to have the south doors and windows all open at such a time. We have gone into poultry houses on such days and been met at the door by an odor which was almost stiffling. The warm rays of the sun streaming through the sash had put all the hens in the notion of dusting themselves, and those which could not gain access to the dusting box were burrowing and fluttering in the dry earth of the floor. The room was filled with a cloud of dust seemingly dense enough to be "cut with a knife." The thawed-out droppings and other hidden filth of the floor were giving out a sickening smell, and altogether the state of affairs was about as bad as it could have been. And yet it was intensely cold on the north side of the building. Your readers are all familiar with the sort of winter days here alluded to. Unless a careful oversight is kept of the chickens, it is not always safe on such days to open up the building in a manner which would allow them to get outside, as they are liable to wander away from the shelter of the house and become chilled. This will depend upon the situation of the house, the arrangement of the yards, if there are any, and the habits of the flock. But fresh air should be freely admitted at the south side. The writer has often thought that if we would construct our houses so as to enable us to throw open at least half of the south wall on such days, converting them practically into open sheds, it would be all the better for the flock. In such a case wire netting, of coure, would need to be stretched on the inside of the studding.

The writer is looked upon as something of a crank by some of his poultry keeping friends, on the subject of fresh air. But our chickens are always in good health. To be sure we lose one now and then, generally from accidental causes, but there is no disease in the flock.

We have never realized the need of ventilators to our poultry houses. We plaster our houses and cover them with good shingle roofs, with no paper under the shingles. The flock is thus secured against cold draughts through the walls, while the small openings which must exiit in the best roof of this kind, furnish a means of escape for the foul air. We create the needed change of air in the buildings wholly through the doors and windows during the day. Of cold nights the house is closed up tlght, and an oil-cloth curtain pulled down inside of the sash. And our sleep is never disturbed with the thought that perhaps our flock is suffering for the want of ventilation.

We have made this communication longer than we intended it to be when we commenced to write. We started out to pen only a sentence or two in relation to the subject of the article. By way of conclusion we shall say, that while the hens must necessarily be kept in confinement, make them feel as nearly like being out of doors as possible, only stopping short of subjecting them to a freezing temperature. This is our plan, at least, and it has worked well with us.

THE BLACK MINORCAS.

The Minorcas are the largest of the non-sitting breeds. The prevailing opinion appears to be that they are not a desirable breed to keep for winter layers. This is pronounced a mistake by those best acquainted with them. When comfortably housed, it is said, no breed is to be preferred to them for the number of eggs which they will furnish during the winter months. Another thing in their favor is that they stand confinement better than any of the breeds of their class. They will keep in good health in quarters which would be fatal to the Leghorns or Hamburgs. These traits of the Minorcas by becoming more generally known are doing much to popularize the breed.

PUMPKIN PIE FOR HENS.

Baked pumpkin or squash is greatly relished by chickens after they have once been induced to fairly taste it. They are apt to refuse it the first time it is placed before them, but soon grow fond of it, and the writer uses it in winter as a midday feed with excellent results. We remove it from the oven about half an hour before feeding time, and give it to the hens quite warm. It seems to satisfy their craving for something of a succulent nature, and fills their crops without tending to the production of fat to an extent which would diminish the yield of eggs. And it is very cheap feeding material to those who have ground upon which to grow the squash. We are sure that we are doing our readers a service in advising them to make arrangements another season for storing up a quantity of squash for this purpose.

THE PLYMOUTH ROCKS IN ENGLAND.

At the recent poultry show in London, a pair of Plymouth Rocks was given first prize for table qualities. Considering the English preference for white skin fowls, and the long established belief there in favor of the superiority of the Dorking as a table fowl, it is somewhat remarkable that this prize should have gone to the Plymouth Rocks. It is pretty generally conceded on this side of the water that there is no better table fowl than the Plymouth Rock, excepting, perhaps, the Games. But the general run of consumers have never feasted on the Games, at least not the choicest specimens of them, and know very little about them. The Plymouth Rock, on the contrary, is found in every locality, and everybody has had the chance to test its good qualities on the table. And the concensus of American opinion is that it is about good enough for anybody. The honors which it has won abroad can hardly add to the popularity which it has long enjoyed at home.

Make Them Scratch.—Don't lose sight of the fact for a moment that the hens must have exercise. Compel them to take it in order to obtain their food, It is good for both chickens and people to be made to scratch for their living.

Keep Clear of the Extremes.—Neither starved or overfed hens will lay. The one extreme is about as bad as the other. Feed liberally, unstintingly, but know what you are feeding for and how to feed in order to produce it.

Feed corn sparingly.

OVERFEEDING.

The most serious mistake which is made by poultry-keepers who really intend to do their duty by their fowls, and supply them with all that their nature requires, is overfeeding. In their anxiety to treat their charges well they go beyond the mark. The consequence is the ruin of the flock, so so far as egg production is concerned, and the disappointment and discouragement of the owner to a degree which often leads to an abandonment of the business.

Laying hens want a variety of food, but not such an abundance of it as one unaccustomed to their care is apt to suppose. They must be kept in good, thrifty condition, but they must not be allowed to become fat. A hen in a proper state of flesh for laying would not be in fit condition for the table. Regarding the amount of food for laying hens, the majority of poultrymen agree that one quart is sufficient for ten hens for twenty-four hours. This has reference to solid food only, such as corn, wheat, meal, or their equivalent in the way of a mixture. No deduction should be made from this for the clover or other bulky material with which the hens must be supplied in order to furnish the best results in the way of eggs. At first glance this appears like very scant feeding. The half of that number of hungry hens would consume the allowance at one meal if it were placed before them. And yet it will be found that the rule in all ordinary cases is a safe one to follow. If any departure is made from it, it should be in the direction of lessening rather than increasing the amount stated. It should be explained, perhaps, that the rule applies to the medium sized breeds. It is designed to represent the nearest approach to a standard amount which it is possible to designate. The good judgment of the keeper should enable him to alter it so as to meet the requirements of the larger and the smaller breeds, increasing the quantity in the one case and diminishing it in the other.

It is safe to say that inexperienced poultry-keepers who aim to bestow the attention upon their flock which they think it is necessary for it to receive, are in the habit of giving at least double this amount of food. And in every instance in which this is done the results in the way of eggs are unsatisfactory. The authorities on poultry matters who are met with the inquiry every day of their lives, "Why don't my hens lay?" might in the majority of cases, without asking for any details, truthfully reply, "Because they have been overfed." In nine cases out of ten there is no need to look any farther for the cause of the trouble.

The bad effects of overfeeding are worst during the winter, and as this is the time when eggs sell at the highest price, the sight of the nearly empty nest boxes day after day is especially exasperating to the keeper. In summer when the hens can forage for a good share of their living they find such a variety of stuff to their liking that they are not apt to fill themselves with concentrated food even if they have access to it. But in winter they have no choice but to take what is given them. And the keeper, calculating that the number of eggs will correspond to the character and quantity of the food, feeds them with a liberal hand. After awhile he either discovers the fact himself or learns it through some authoritative source, that he has made it impossible for his hens to lay by getting them too fat. Then he straightway reduces the food one half, perhaps, but his pampered hens resent this change, and whereas they were laying an egg or two at long intervals before, they now cease altogether. If this occurs near the middle of the winter, as it probably will, the best disposition which can be made of those hens is to send them to market. They cannot be brought down into laying condition in time to be of profit to the owner. It is easy enough to take the fat off of them, but it is by no means certain that the laying qualities will be stimulated as the result of this reduction of flesh. The hens will not readily adapt themselves to a change from the high feeding to which they had been accustomed. So far as that season is concerned it will usually be found that they are a spoiled lot of hens as layers, and the sooner they are sent to market the better.

Lime in the Poultry House.—Lime should be used freely about the poultry house, though some have argued themselves into the belief that it is a disadvantage. except when used in a very sparing way. All the same use plenty of lime. Scatter it about in all the nooks and corners where any foul thing could find lodgment and give rise to a foul oder. The person who does this will usually have healthy fowls, and will never know anything about the bad effects of lime in the poultry house.

The Best Breed.—It is about time for it to be known that there is no best breed. When the best breed is found there will only be one breed.

ONE OF THE DISCOURAGEMENTS

If after doing all in your power to make your hens profitable, they seem to be utterly ungrateful for all the care bestowed upon them, and are withholding the expected supply of eggs, do not allow yourself to become wholly discouraged and conclude that after all there is no money to be made in the hen business. There is something wrong with the fowls, or else something not just right in the management. If you "stick to your knitting" you will find out what the trouble is after awhile, and at the same time will learn a lesson which will be worth many big silver dollars to you in the future. The writer knows just how you feel about it. He has "been there" himself, and expects to be made to go through with the same woful experience again. He and his chickens would have parted company long ago if he had yielded to the discouragement incident to such a state of affairs as that above described. A lot of hens will sometimes be got together which seem to live for no other purpose than to plague the life out of the poultryman. They keep in apparent good health and are tip-top feeders, but are sublimely indifferent to all your efforts to induce them to lay. Though you feel like annihilating the whole crowd, your good sense tells you, or ought to at least, that the hens are really not to blame for it. They are simply a machine, and cannot help laying eggs if placed under conditions which conform to the requirements of their nature. By reason of some mistake, or oversight, or accident, the machine is a little out of gear, and it may take an expert to locate the trouble and set it to going. When all parts are rightly adjusted it will start up and do its work to perfection. But it is a complicated affair, and even the most expert of experts is sometimes sorely bothered to find out what is the matter with it. If the party in charge, however, is really fit for the task which he has assumed, he will finally overcome the difficulty and make the hens do their duty. It is just this kind of trouble which prevents the poultry business from being overdone. It is what breaks the backs of legions of amateur poultrymen. The fellows who have proved stayers have all met it and mastered it.

Variety of Feed.—Give the greatest possible variety in the feed. It costs no more to do this than it does to restrict the feed to one or two articles.

The hardiest breed of chickens is the Light Brahma.

CROSS-BREEDING.

The average poultry-keeper will have better success with cross-bred fowls than with full-bloods. The union of the blood of two breeds seems to impart greater vigor, strength and hardiness to the product than exists in either of the breeds from which the cross is made. This fact is so well understood that cross-breeding is now commonly resorted to on the large egg farms of the country. Some well-known authorities still deny that the laying qualities are improved by this crossing of the breeds, but their views are not in accord with the experience of most practical poultry-raisers.

The prize-winning birds which present such a superb appearance at the poultry shows are the outgrowth of more or less close breeding. This sort of thing often has to be carried to a dangerous extreme in order to obtain the points desired. There is no need to explain how this tends to lower the stamina of the birds. But this weakness is not transmitted to the product of two such breeds, at least not in the same degree in which it exists in the parents. The offspring, in obedience to a law of nature, will possess a better constitution than either of the birds from which it derived its origin.

But it must be understood that cross-breeding is not the promiscuous mixing up of all breeds that we often see on the farms, and in the yards of careless poultry-raisers. The parents of a cross-bred bird are both full-bloods, but belong to breeds distinctly different. The product of such a union is something altogether different from a grade, which may not be any better than a scrub, and as a matter of fact is often not as good.

THE INFLUENCE OF EXAMPLE.

Winter is the time when hens are most liable to contract bad habits, such as feather-pulling, for instance. It is well to keep a lookout for this, and as soon as anything of the kind is detected, to take immediate measures for putting a stop to it. The removal of one or two hens at the beginning will usually put an end to it. If nothing is done about it, however, the whole flock will soon become addicted to it as the result of the example of a few individuals, and the usefulness of the pen wholly destroyed. Owing to their more active nature and greater restlessness in confinement, the small non-sitting breeds are more liable to fall into this vice than the larger ones. It is the outgrowth of a nervous nature more than anything else.

BROILER RAISING IN IOWA.

It is quite generally believed that there is no money to be made at broiler raising except in the neighborhood of the large cities. It is a fact, however, that in some of the villages of northwestern Iowa people are giving their attention to the broiler business and find it fairly profitable. The name of a man could be given who last winter reared a thousand chicks which he sold when they weighed two pounds, and he is so well pleased with the experiment that he has provided himself with the second incubator with a view to engaging in the business in a more extensive way the present season. He works at one of the building trades in summer, and this broiler business gives him employment during the winter when he would otherwise be idle. The chicks are out of the way in April or May, or else have attained a size when it is no longer necessary for them to have the continued attention of the keeper. People who have several months of spare time during the winter might in this way turn it to good account. It is a fact that some people are making money by this means. How much we do not know, but certainly enough to pay them reasonably well for the time and labor thus employed. The conduct of the said people seems to be conclusive evidence of this fact.

And yet we do not advise people who live in districts remote from the cities to engage in the broiler business. We shall be very clear of coaxing such a knot on our head as we know we would get if we should do such a thing as that. More than half of the people who would act on the advice would be totally unfit for the business. Without any knowledge of poultry-keeping in general, and possessing none of the qualities of the successful poultryman, they would go into the business with a rush, and after a sorrowful experience of a few months, out of it in the same way. And then they would go gunning for scalp of the MESSENGER.

But there are numbers of people in the villages and on the farms who by reason of their experience with poultry are well equipped for engaging in this business, and they would begin it with something like a correct idea of what would be required at their hands to make it a profitable employment, provided such a thing were possible. And many of them are people whose time is not fully occupied during the winter, and who could attend to this work without any interference with the vocation which is their regular means of a livelihood during the balance of the year. We would like to see more people of this description do a little experimenting along this line. Such people would not let their enthusiasm run away with their sense. They would move ahead with all the caution which the circumstances of the case demanded, and would not involve themselves in heavy loss in the event of an unsatisfactory ending of the experiment. And whatever the outcome, they would be competent to give an intelligent opinion concerning the likelihood of creating a paying business out of broiler raising under such conditions. After such a test as they would be capable of giving it, their report in regard to the matter would be looked upon as expert testimony. And such it would be in fact.

But people with but little or no experience in poultry-keeping, and with only such a superficial knowledge of it as can be obtained by reading, had better not attempt anything of this kind. There are fifty chances to one against such a person making a success of it even if success is possible. If, in spite of the warnings which in a case like this any old veteran in the business would give them, they should conclude to try it, they will be sure to get the conceit taken out of them, and that is about all the good which will be accomplished by it.

A FEW DON'TS.

Don't neglect the dust bath.

Don't keep your fowls in a dark, damp house.

Don't expect your hens to lay while covered with lice.

Don't feed corn morning, noon and and night, and then wonder why you fail to get eggs,

Don't fail to give a warm mash of some kind for the morning meal. Clover heads, or clover hay cut fine, scalded and mixed with bran or meal, make an excellent feed, and very cheap.

Don't neglect to give your hens plenty of straw, chaff or leaves to scratch in. See that they have warm, fresh water to drink. Throw wheat where they will be obliged to exert themselves to get it, and the eggs will not be lacking.

Don't throw away the bones and the scraps from the table. All these go to make up variety in the feed, and can be given to poultry with more advantage than to anything else.

Don't become disheartened if matters do not go in the poultry yard just as you calculated they would. Have faith enough in yourself to believe that you can learn how to handle poultry as successfully as anybody can.

PULLETS DO BEST.

Many people who have but indifferent success with hens as winter layers manage to obtain satisfactory results with pullets. We believe that as a rule those who are comparatively new to the poultry business will find it safer to keep pullets for winter layers than hens. The hens will lay just as well as the pullets if healthy and properly handled, but it takes a longer experience to find out the correct method of caring for them.

It is the regular practice of many old poultrymen to dispose of their laying stock every summer, restocking their coops in the fall entirely with birds hatched the preceding spring. They do this on account of the greater ease and certainty with which the pullets can be brought into a laying condition in time to reap the benefit of the winter prices for eggs. And yet the fact must not be concealed that many old and successful poultrymen prefer the one and two year old hens. But those whose preference is for the pullets are greatly in the majority.

There is another thing in favor of the pullets which does not escape the observation of bright witted poultrymen. There is less liability to disease in the poultry house with them than with the hens. They generally go into their winter quarters in a perfect state of health. Having survived the perils of early chickenhood, they are not likely to be troubled with any disease the balance of the summer, unless they are exposed to some contagion. They come off of the range where they have roamed all the season without the taint of disease of any kind.

But the hens have passed through a long and tedious winter in the close confinement of the poultry house. No matter how complete the arrangements of the building, or how good the attention which they have received, they have existed there under artificial conditions, and have lost ground in a physical sense during their imprisonment. In a flock of twenty-five hens there will always be some which by spring will be suffering with some plainly discernible disease. These are cast aside, as it is easily seen that they will be of no account for layers another winter. But how can it be told how many others are in the flock which having been exposed to the same influences have the germs of disease implanted in them, though there is no outward evidence of it at this time. It is almost certain that some of them will need hospital attentions before they have half completed their second winter. Some of the diseases to which poultry is particularly subject during the winter are of a very insidious nature. Roup, for instance, in its milder form, may have fastened itself on a hen, and the fact not be suspected by the owner. This may occur towards the close of the winter. Whatever slight indications of it existed at the time may wholly disappear with the coming of warmer weather, the hen having every sign of good health. And yet she is in a diseased condition, and soon after the first cold snap of the next winter the owner will have all the proof he needs of that fact.

The above are a few of the reasons why the majority of poultry-keepers prefer to have pullets for winter layers rather than hens one and a half years old and over. Considerably more could be said on the subject, but it would lengthen out this article far beyond the limits which must be assigned to it.

Start Right.—If you are new to the poultry business, and will begin with a dozen hens, at the same time having an understanding with yourself that you have everything to learn, you will succeed all right if you stick to your job. On the contrary, if you have an idea that without any apprenticeship in the business, you can learn all about it and make good money out of it at the same time, you will soon find out that you have made just as big a failure in the chicken business as have all the other over-confident fellows who have started that way.

Castor Oil for Sick Hens.—When one of your hens acts dumpish, and you don't know what is the matter with her, or what to do for her, and yet feel that you ought to do something, try the effect of a teaspoonful of castor oil. In many cases it will be found that the hens which were expected to die will be all right again in three or four days. When you have got to "go it blind" in your doctoring, we know of nothing which will oftener reach the seat of trouble than castor oil. The best way to administer it is by means of a small glass syringe through which the oil can be injected into the throat.

Has a Better Job.—If you want to get the very best results from your chickens you must look after them yourself. This is one of the things which you cannot hire men to do. The fellow who is capable of doing the work as you would have it done is fully engaged in looking after a lot of poultry of his own.

Regularity in feeding is only second in importance to the quantity and character of the material fed.

BREEDING FOR WINTER LAYERS.

If one is desirous of providing himself with a flock of hens from which the greatest possible number of eggs can be obtained during the winter, he must make it a rule to reserve for breeding purposes the earliest and best layers of his flock. By following this rule for a few years he will be surprised at the yield of eggs over and above what he formerly received There is no other process by which the highest results in the way of eggs can be reached. The best laying flocks which are to be found are the outgrowth of the adoption of such a rule as the above, and the close observance of it through a series of years. This is simply taking advantage of the law of heredity with a view to the utmost development of the egg-producing capacity, the same as is done by the dairyman who expects by judicious selection and breeding to produce a strain of superior milkers.

The finest appearing birds, those which would be the center of attraction in the show room, are not usually good layers. In the effort to obtain the perfection of form and marking to which they owe their value as exhibition stock, the laying qualities have in a measure been bred out of them. Or more correctly speaking, these qualities have deteriorated because they have been overlooked and neglected in the endeavor to secure the most extreme development in another direction.

All this goes to show that first-class layers are not obtained by accident, but are the result of laws well understood by all intelligent breeders. The poultryman who is becomingly proud of his fine laying stock this winter, will be just as proud of the progeny of that stock next winter. It is a wise plan, therefore, when the breeding season approaches, to remove the best layers from the coops where they have been during the winter, and place them in quarters by themselves. The eggs from this coop should be used for hatching out what are intended for the layers the succeeding winter. At the end of a few years, if this system is regularly adhered to, the owner will find himself in possession of a superior lot of layers which he could not have acquired by any other means.

Shovel Away the Snow.—When the snows come clean away a space on the south side of the poultry house, in order that the hens may have a warm, dry spot for taking an airing on such days as are fit for them to be out of doors.

SHIPPING DRESSED POULTRY.

Poultry raisers who by reason of the most frequent tests of the matter, have found out that it pays best to dress the poultry which they ship during the winter. This is something of a job, but then one is making good wages while thus employed.

But before a person makes a beginning on a task of this kind, he should be sure that he understands how to fit up the birds in the most attractive form for the market to which they are to go. Like anything else, the appearance has a great deal to do with fixing the price of the article when it is exposed to the eye of the public.

If the shipment is to be made to a commission house, it is a good plan to write to the house for instructions concerning the best method of dressing. Most large commission houses have printed instructions on this subject which they are glad to send to their customers, as they are thereby enabled to make better sales, and, as a consequence, increase their chances of getting more business from the shipper. The mode of dressing which would cause the fowls to be rated choice stock in one market, would reduce them to second or third grade in another. The commission men know what is the proper thing for their own market, and the shipper will show good judgment in governing himself by the advice of a responsible firm in a matter of this kind But whether such advice as this is sought or not, the fact should not be lost sight of for a moment that the most absolute cleanliness and neatness must be observed in preparing dressed poultry for market. While it is important to copy the mode of dressing demanded by the market to which it goes to seek a buyer, nothing will atone for a slovenly habit in picking or packing. The person who is not willing to go to the most extreme limit in the way of neatness had better not undertake a job of this description. He will do better to ship his poultry alive, or sell it to the local buyers.

How to Feed Brahmas.—If the Brahmas don't lay, try the effect of a small allowance of the warm mash in the morning and a full feed of grain at night. Have abundance of straw on the floor, and from time to time during the day scatter a spoonful of wheat in this so as to keep them exercising as much as possible.

Don't keep a lot of worthless fowls over winter. Cull closely and breed only from the best. Keep the fowls at work.

EGG-EATING HENS.

Egg-eating is about the worst vice to which a lot of hens can become addicted. This is something for which the poultry-keeper must be constantly on the lookout. In winter he must be especially watchful. The hens are not so liable to fall into the vice in summer, for this is only another of the bad habits which they are apt to contract during confinement to close quarters in winter. There is nothing which the hens could do which is quite so provoking to the poultryman as egg-eating. And there is apparently no cure for the habit. A hen which has once eaten an egg will repeat the act every time she has the opportunity. If you can catch that hen and kill her before she has taught any of her associates to follow her example, you may nip the thing in the bud. Chickens, like other two-legged creatures of more intelligence, are apt pupils when it comes to learning things which they have no business to know. And the egg-eater takes especial pains to persuade all the other hens in the coop to do the same thing. She does not eat the egg in secret, or try to conceal from the others what she is doing. On the contrary, she is shamelessly open and above board in her theft. She seems to be possessed with the idea that she has done something pretty smart, and wants all hendom to be witnesses of that fact. Seizing the egg in her bill, she starts on a circus race around the the coop or yard. The contents of the egg, meanwhile, are streaming over the ground, and all the hens in the inclosure get a taste of a morsel which is new to them, but which is very much to their fancy. They all pronounce it good, and decide to do a little egg-eating on their own account the very first opportunity.

There are various plans recommended for putting a stop to this bad habit on the part of a lot of hens, but we wouldn't give a continental for any of the plans, devices or contraptions which people are advised to use for this purpose. We don't deny that some of them do answer the purpose within a limited degree, but they are usually of more bother than they are worth. And, besides, none of them will cure the hens of the habit; they merely remove from them the possibility of getting within reach of the eggs. They always remain the same disreputable lot of hens, a constant cross and irritant to the owner, and a disgrace to any well ordered poultry farm.

But while the vice of egg-eating when once acquired cannot be cured, it can generally be prevented. People who have much to do with poultry are not greatly troubled with anything of this kind, as they have learned how to dispose things about the poultry house so as to not tempt the hens to form the habit. The nest boxes should always be darkened. Eggs lying in the nests in full sight of the inmates of the coop is the surest means which one could adopt for getting a lot of egg-eating hens on his hands. The old practice of arranging the nest boxes along one of the walls, with the entrance towards the room and away from the wall, ought to be entirely done away with. Such boxes are now never seen in the houses of any well informed poultry-keeper, or if found there it is not because the owner does not know that they ought to be discarded. We cannot undertake here to lay down the various plans for nest boxes of the most approved patterns. That must be the subject of a separate article, but any one with the least particle of ingenuity can contrive something which will be free from the faults of the style of box above referred to. The hen prefers a nest in a dimly lighted, out of the way place. She will always choose a nest of this kind rather than one in an exposed situation. If then the nest boxes are made as advised above, they will the better meet the layers' notion of what a nest should be, besides hiding the eggs away from the idlers and mischief-makers of the flock. This may not wholly prevent the vice of egg-eating, but it will greatly lessen the chances of it.

Be sure that there are nest boxes enough. The failure to see to this leads to dropping the eggs on the floor, generally in shallow depressions in the corners, which is even worse than depositing them in unconcealed nests. A coop of the finest winter layers which the writer ever owned became a lot of incurable egg-eaters as the result of an oversight of this kind.

Haven't Quit School.—If you do not think as the MESSENGER does about things, do not hesitate to tell it so. The editors don't claim to know more than a little bit about poultry-keeping, and are just as ready to receive instruction as to give it.

Pluck Always Wins.—Lots of people make a failure of the chicken business, but chickens are money makers, all the same. It is best for everyone to know, however, that it takes pluck to make a success of it, and if you are not possessed with abundance of that quality, you had better touch it very lightly.

MILK AS A FOOD FOR HENS.

A portion of the waste milk cannot be put to any better use than fed to the hens. Don't give it all to the pigs, if you have a flock of chickens. A quart of milk a day to every twenty hens will have a beneficial effect on the fowls by making a change from the grain diet to which most flocks are too closely confined. Everybody knows the advantage of giving meat to laying hens, especially during the winter when they cannot gather insects as they do while on the range in summer. The milk will in a measure take the place of the meat. The majority of poultry raisers cannot conveniently procure meat for their fowls, at least not with that regularity with which it should be given them if one is aiming at the best results. Those who make a business of poultry-keeping recognize the fact that they cannot get along without the meat, and govern themselves accordingly. But as poultry is usually kept on the farms and in the villages, not as the main dependence of the owner, but for the purpose of helping out on the family expenses, the meat cannot be supplied, or at least it will not be, except in such limited amount as it may be found in the scraps from the table. But on the farm there is always plenty of milk, and the hens should have a share of it. It will be found that they will eat it with a better relish if it is not given to them until after it has thickened, or "lobbered."

We have discovered that some people are of the opinion that milk is a complete substitute for water, and that when the hens have plenty of it they do not need anything else in the way of drink. But this is a mistake. While the milk does to a certain extent take the place of water, it cannot be made to wholly do so. The fowls must have water no matter how much milk is given them. If deprived of water for a day they will appear half famished for it, even though milk has been before them all the while. We have known of instances where poultry has been subjected to intense suffering as the consequence of such an error as this on the part of the owner.

Fat Hens Lay Large Eggs.—That is, when they lay any at all. When the poultry-keeper is getting eggs above the normal size, it is said to be an evidence that the hens have been overfed. It is not always an easy matter to tell when the hens are getting just the quantity of feed which they ought to have and no more. The size of the egg can be made of some assistance in deciding this point.

TOO MUCH OF A GOOD THING.

Glass is a good thing to have in the south side of a poultry house. It admits the light and heat of the sun and makes the interior of the house comfortable for the fowls during the bright cold days of winter. But there can be too much glass in the poultry house. Fowl houses are often seen where the glass business is much overdone. The glass is spread all over the south side of the house, and, maybe, laps over half the surface of the ends. This is altogether too much of a good thing. It was the intention of the owner, no doubt, to have a warm poultry house. He could not have adopted a surer way of having a cold one. Such a house is only warm when the sun shines, and then it will often become too warm, unless the owner is careful about the ventilation. Of dark, murky days, and at night, the fowls will suffer with cold if the outside temperature is low enough to be called cold weather.

Two windows as large as those commonly used in dwellings are enough for an ordinary poultry house. As fowls are usually kept, they will be warmer in a house with windows of this size than in one where more wall space is given up to this purpose.

There would be less objection to the large windows if the house was fitted with good wooden shutters which could be closed of cold nights, and partly so in the day time during the prevalence of cold south winds. But only a very small proportion of poultry houses will be furnished with the shutters. Those who go to the extreme in the matter of large windows are not apt to understand the need of the shutters, and when they become convinced of the mistake which they have made, they will generally decide that it is more economical to remove a portion of the windows than to provide the shutters.

Greenhouses are largely composed of glass, but they are also provided with furnaces or stoves with which to heat them at night. These houses are much colder at night than a building with wooden walls, boarded up and battoned after the manner of an ordinary western barn. They do not hold the heat. In a little while after the sun goes down the heat has been radiated through the glass, and the temperature of the room is almost as low as it would be if that portion of the structure occupied by the glass were a perfectly open space. In the matter of a poultry house, this could be overcome, of course, by means of a stove, but the experience of those who have tried it seems to have settled the point that artificial heat cannot be profitably employed under such circumstances. A poultry house is not a greenhouse. The better way is to be moderate in the use of glass in the first place, and if the house is properly built it will be warm enough without the stove.

AN AFTER DARK VISIT TO THE POULTRY HOUSE.

Make an occasional visit to the fowl house at night after the chickens are quietly settled on their perches. If you hear a wheezing sound you may regard it as good ground for suspicioning that it is the beginning of a case of roup. Hunt out the fowl which is making it, and look under the wings for a cheese-like substance deposited there through the nostrils. If found, remove the fowl from the coop and proceed to doctor it for the roup if you have any desire to try your hand on that kind of a job. Our remedy is the hatchet, and it would have to be an exceedingly valuable bird if we undertook to effect a cure in any other way. Still we know some very truthful people who claim to be able to cure the roup. And we don't want to be understood as saying that it cannot be done.

CORN FODDER FOR LAYING HENS

Has the reader ever observed with what a relish chickens will attack a bundle of nicely cured corn fodder blades, if thrown into their coop in winter? Even a flock which is fed chopped clover every morning will eat a large amount of the fodder during the day if it is placed within their reach. And the fowls keep in such a thrifty condition that one is forced to believe that there is something about the fodder which exactly supplies one of the wants of their system. The writer throws the blades to them in the bundle, just as taken from the mow, though it seems a better way would be to run them through a cutter and steam them. There is sufficient reason for believing that one would be well paid for the trouble of saving a quantity of the blades every fall for this purpose. Perhaps an easier way to obtain the fodder would be to sow a small patch of ground to corn, and cut the crop before the ears commence to form.

Burned Bone.—The old dried bones which are lying about the place will be put to a good use if fed to the chickens. They should be put in the fire and allowed to remain there until charred through, when they can be crushed to a coarse powder with a brick.

The Poultry Messenger,
AND
Western Fruit-Grower.

Published the first of every month by
The Messenger Company,
AURELIA, IOWA.

Subscription Price, 50 Cents per Year.

Breeders Cards.—Set in plain type, without display, one cent per word each insertion. No advertisement inserted for less than 25 cents.

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The publishers of the Homestead, the weekly twenty-four page agricultural paper of Des Moines, Iowa, edited by a practical farmer, inform us that they will send us a few sample copies of their paper, FREE OF CHARGE, to every farmer not already a subscriber, who will send his name and address plainly written on a postal card, to the HOMESTEAD COMPANY, Des Moines, Iowa. The copies will be ABSOLUTELY FREE, and will be sent to any farmer to enable him to judge for himself of the merits of the Homestead as a paper devoted to his special interests.

Every poultryman who reads this paper is requested to send to us for samples and prices of Letter and Note Heads, Envelopes, Cards, Shipping Tags, and other job work of that kind. We can suit you both in price and style of work.

Every article in the MESSENGER has been prepared especially for its pages, either by the editor or by some contributor. We shall not follow the common practice of printing a line over all original articles explaining that they were written for this paper. When we copy from other journals, as we shall frequently do, we will give the proper credit, and when nothing of this kind appears in connection with an article, it may be known that it was prepared by some one under engagement to write for this paper. The names of the writers will not be attached to the articles unless there is some special reason for attaching them thereto. We expect to secure some papers for the fruit-growing department from some high authorities in the horticultural world, and the names of these writers will be published for obvious reasons. But as a usual thing the articles will be unsigned, as the most of our contributors prefer to have it that way, and there is nothing to be gained by pursuing the opposite course.

The MESSENGER will not be sent to any address for a longer period than that for which it has been ordered. People who subscribe for it may rest assured that it will be discontinued at the end of the time that they directed it to be sent to them. They will not be troubled with subscription accounts from this office not of their own making. We assume that they know whether they need the paper or not, and shall not undertake to decide that question for them.

The Value of New Blood.—If you want strong, vigorous, good laying stock, you should introduce new blood into your flock every year. You cannot do this if you are aiming to establish a strain. Inbreeding to a greater or less extent then becomes a necessity, but the above advice may be followed by most poultry-keepers, as very few of them have an ambition in that direction.

OUR ADVERTISERS.

The Pilot Rock Nurseries are enlarging their business from year to year, and are building up a constantly increasing trade both at home and abroad. Mr. Freeman, the proprietor, is personally known to the editor of this paper as a man of excellent character, and those who do business with him may confidently rely upon receiving honest treatment.

P. D. Wine's yard of Buff Wyandottes is the admiration of all who see it. These fowls are not only as "pretty as a picture," but they have made a remarkable record as winter layers. They have gone ahead of all expectations in the number of eggs which they have laid during the cold months. Mr. Wine also owns a very fine flock of the White Crested Black Polish, and is offering the eggs of both breeds at very low figures.

Mr. A. J. Norris, the Cedar Falls nurseryman, sends us an advertisement in which he gives especial prominence to the Perfection Black Raspberry. This raspberry is a valuable addition to the list of small fruits if its record is half as good as what is claimed for it, and we have the best of reasons for believing that Mr Norris has made a correct statement in regard to it. The price which he has placed upon plants of such value is certainly very moderate

We are sure that no one in this locality is the possessor of a finer flock of Barred Plymouth Rocks than T. C. Crepps. For more than ten years he has been introducing into his flock the best blood which he could obtain, and from first to last has been to much expense in order to stock his grounds with his present collection of choice birds. Mr. Crepps is also a breeder of full-blood Poland-China hogs. It will be seen by reference to his advertisement that he has some sows for sale, and breeders of the Polands will know from the numbers there given that his herd is strictly first-class.

Mr. David Nauman, of West Liberty, Iowa, has a few high scoring birds which he will sell out of his flock of Barred Plymouth Rocks. This gentlemen has been a breeder of the Duroc Jersey hogs for many years, and probably has as fine a herd of that kind of stock as can be found in the state. He would be pleased to correspond with parties desirous of purchasing either fowls or hogs of the breeds to which he is giving his attention.

The Problem Solved.

Mr. Jordan Holland, a highly respected, successful farmer of Alabama, has at last solved the hog and chicken cholera problem. He has discovered a positive and guaranteed cure for the disease. His daughter, Mrs. Rachel V. Thomas, a reliable Christian lady of Cowarts, Ala., is selling the formula and family rights on a guarantee to refund the money if the remedy fails to cure. Read her advertisement. She wants agents.

Send stamp to this office for a specimen copy of a little 12-page pamphlet descriptive of the Plymouth Rock. No better advertisement for this breed

THE WESTERN Fruit Grower.

WILLFUL IGNORANCE.

The fellow is still living in Iowa who believes that it is of no use to plant fruit trees in this state, particularly in the northwestern part of it. He is absolutely sure that it is simply a waste of time and money to attempt anything in this line where, according to official decision, the finest apples exhibited at the World's Fair were produced. The way he happens to know so much about it is that he once set out an orchard, perhaps twelve or fifteen years ago, and not one of the trees are alive today. And so when he says that fruit-growing wont do in northwestern Iowa he knows what he is talking about.

This man's neighbor at the next four corners has a thrifty young orchard on his farm. It furnishes the family with all the apples they need, and, besides, the sales which are made from it some years add a couple of hundred dollars to the owner's income. During the summer and fall the nearest market town is almost wholly supplied with apples from the orchards in the immediate vicinity of it, and this source of supply has come to be regarded so reliable as to be fully depended upon except when the crop is cut short or destroyed by bad seasons. And the loss of the crop in this way is not a more frequent occurrence here than it is several hundred miles south of us. The fellow whom we have been talking about has full knowledge of these facts. The orchards which are a source of profit to the owners, are in plain sight of the road which he travels several times every week. He sees the trees bending beneath their load of fruit, and he frequently eats of it served at his own table And still he has nothing to say in favor of fruit-growing. He has settled down to the conviction that fruit is a failure in northwestern Iowa, and though this is disproven by the evidence of his own senses, he cannot be argued or reasoned out of that absurd opinion. Northwestern Iowa abounds with people who display no better judgment than this on the subject of fruit-growing. Most of them, too, are hard-headed people and talk good sense on any other subject. It only goes to show how deeply-rooted is the prejudice against orcharding in the northwest, and to prove that it is prejudice and nothing else. It had its origin in the failures which followed the first attempts in this direction, when there was no means of knowing what was suited to the conditions existing here, and all that was done was necessarily in the way of experiment.

The people who have the most to say against orcharding will never get over their prejudice and undertake to grow fruit trees on anything like the scale which they would do, if they could be induced to give just and candid consideration to the evidence in favor of it which is easily within the reach of all. They are as a general thing old residents whose efforts to produce a bearing orchard years ago ended in disappointment, and they cannot be persuaded that any better success would follow a second trial. But these people, without so intending, are doing a great deal of harm. They are filling the minds of others with false ideas of the risks in that direction. Many persons who would in time become the owners of profitable orchards are in this way being deterred from making a start. Northwestern Iowa would like to be able to persuade these old residents to refrain from the further exercise of this harmful influence.

CONCORD NOT THE BEST.

The Concord is a good grape. and the writer has no object in trying to create any prejudice against it. But it is not the best grape for people in this northern climate to plant for family use. Moore's Early and Worden are both to be preferred to it. They ripen their fruit earlier, the fruit is of a better quality, and there is no difference between them and the Concord as to hardiness. The idea prevails among small growers that there is nothing better than the Concord, and where only a few vines are wanted for family use, this variety is more frequently chosen than any other. Concord is a familiar name, and it is known to be a reliable kind. It is therefore selected by persons not well read up on grape culture in the belief that it is about the best. It is not the best, and this class of growers will have better grapes when they come to fully understand that fact. In markets where the three kinds have been well introduced, and their comparative merits are understood, the Concord is almost unsalable in competition with the Worden and Moore's Early.

Blackberries and raspberries in their natural state are an undergrowth, and they will never get over the need of some protection.

HAVE A SPECIALTY.

Every fruit grower ought to be a specialist. That is, he should give his hardest study and most earnest efforts to some one thing, and by such means learn to produce that in greater abundance, or else in better form and quality, than can be done by any of his neighbors. He will thus have something which will always sell above the market price, and place a beautiful balance on the right side of his ledger. We don't want to be understood as saying that a man should place his reliance almost entirely on one kind of fruit. We consider that the most hazardous kind of fruit farming, and while some men have made a "stake" in that way, it has usually been due to blind luck, and not to the good management or foresight of the party whose fortune was thus made. Grow as great a variety of fruits as your locality will admit of, and aim at a high degree of excellence in all. But let some special crop occupy a larger share of your attention than any other. It should be the grower's purpose to make this crop better than what he would attempt in anything else, and so much superior to the common run of that product that the difference can be readily appreciated by every observer. To be a specialist is to be in line with the tendency of the times. Every fruit grower who is well fitted for the pursuit which he is following, will find it profitable to give himself special equipment for producing a certain kind of crop better than any one else with whom he is liable to come in competition.

The Dewberry.—Many fruit growers have difficulty in finding a ready market for the dewberry. Some of the finest looking and best varieties, in a general way, have a peculiar flavor which is not relished by most people. As a rule it will be found that the ground given to dewberries will return a better profit if planted to blackberries.

We Beat the World.—Prof. Green, of the Ohio station, says: "From a sojourn of nearly three months in various parts of Europe, and from such other information as I can gather, I can say positively, that the United States is the most progressive country in the world as a fruit growing country."

Gravelly Soil for Cherries.—Cherry trees do best in gravelly soil. A gravelly knoll is a good place on which to place them if such a spot is to be found convenient to the buildings. But the trees must be mulched and manured the same as if planted on smoother soil.

AN UNFORTUNATE MISTAKE.

Perhaps there is no class of men so thoroughly misunderstood by a large proportion of their patrons as the nurserymen. If one will travel through the country for the purpose of selling nursery stock he will come in contact with a dozen men a day who have some story of wrong to tell which they have suffered at the hands of some dishonest nurseryman. It does not take one so employed long to discover that nurserymen in general are in bad standing with fully one-half of those who have been at one time and another purchasers of their goods. The self-respecting salesmen of a nursery is often made to feel like a thief by those whom he would make his customers. Their manner plainly tells him that they believe the object of his visit to them is not for the transaction of business in a legitimate way, but for making them the victims of a swindle. These men think they are justified in holding this view of nurserymen, and of every individual who confesses to having any connection with them.

And yet in the face of all this we venture to say that there is as much honesty among nurserymen as any other class. They are not guilty of a thousandth part of the wrong-doing which is so freely charged against them. If one has need of anything which the nurseryman has to sell, he assumes no greater risk in making the purchase than he does when he buys of his merchant, or anybody else, provided he goes about the business in a rational way. If he prefers to make the deal through some unknown party who may have no authority to sell for the nursery, and whose looks and manner are those of a rascal, as anybody should be able to see, he is going to get beat. And this is just what is the matter with nine-tenths of the people who are so confident that nurseries, as a rule, are in the hands of people of little principle

The foundation of the trouble is that the average farmer is not a trained horticulturist. Finding abundance to engage his head and hands in his regular farm work, his information in regard to fruit culture is far from being thorough. He believes that he has not had the time at his disposal to become well informed on this subject, and it is a fact that he has not. A man with the care of a hundred and sixty acres of land on his hands has little opportunity to acquire anything more than a very limited knowledge of orcharding, or of any other line of work apart from that to which circumstances compel him to give his chief attention. But the majority of farmers want an orchard on their farm if they are fitting it up for a home, and they get their trees from the traveling tree peddler, and the peddler gets them from nobody knows where. The trees don't grow, of course. The agent knew they wouldn't when he delivered them. But he finds plenty of people who are ready to pay for that kind of stock, and it is very profitable stuff for him to handle.

More failures to grow good orchards on the farms are chargeable to this cause than to anything else. Anyone desiring to procure trees can deal with the nursery direct, or else through some representative of it who is personally known to him. If he does this he will get a square deal every time, or at least as often as he would get in dealing with a firm in any other line of business. If farmers are not expert judges of nursery stock, and from the nature of things, but few of them can be, they should not put themselves so completely at the mercy of these traveling salesmen, many of whom are in the business solely on account of the opportunities it offers for fraud.

This ill-feeling against the nurseries will continue as long as farmers make a habit of obtaining goods of this class in the way that most of them have done in the past. Not that all traveling salesmen are swindlers, but the evidence is pretty conclusive that the majority of those who have so employed their time and talents in years gone by have been just that and nothing else.

We have merely touched upon one of the reasons why so many people have had their faith so severely shaken in nurserymen, and the one which is without doubt responsible for most of the trouble. It is not to be denied that other things have had something to do with it, such as the unintentional neglect or abuse of good stock when received, and in some cases the downright dishonesty of the nurseryman from whom it was obtained. But this last fact has contributed to it in far less measure than either of the other two.

THE PEACH IN NORTHERN IOWA.

While nobody claims that peaches can be successfully produced in northern Iowa without protection, it is a fact that there are people who are growing them in quantities more than sufficient for family use by laying down the trees and covering. Nor is this the laborious undertaking which one who is not familiar with the process would suppose. Mr. D. W. Lotspeich, a well known fruit-grower of this state, thus describes the plan now commonly adopted by those who are growing this fruit in northern Iowa:

"It has been our experience that to grow about three trunks from each root is best. We then bend all to the ground in the fall in the same direction in fan shape, just far enough apart so that they will not touch when they have attained size. If the trunks have not grown five feet high before laying down in the fall, allow them to stand upright in the spring until they do, and always keep each trunk trimmed to a single stem. Now in the spring after you have taken the covering off, turn up the extreme top of each tree or trunk about four feet from the root, and tie to a stake and encourage upward growth of the erect portion. In the fall cut your trees loose from the stakes, and press them down to the earth to the right or left and fasten, covering with some coarse mulch. It is easier to bend three stems two inches thick than it is one six inches. Plant your trees where the snow is liable to drift."

MAY DO BETTER WHEN OLDER.

The first fruit of a young tree, especially one possessing a rapid habit of growth, is often much inferior to what it is after the tree has attained greater age. Some of our most highly prized fruits of to-day are gathered from trees whose original crops were considered absolutely worthless, and incidents could be related where such trees were condemned to destruction and owed their preservation to accident. Experienced fruit-growers who are familiar with this fact are no longer liable to make way with a tree if its fruit seems without merit when it first comes into bearing, as they know that the fruit may be much improved when the tree has stood a few years longer. Orchard owners who are not experienced fruit-growers are sometimes disappointed in the fruit which is borne by their young trees, and are ready to suspicion that they have been imposed upon in the varieties which they had intended to buy. It will be well for such persons to keep the fact above stated in mind, as they may thereby be restrained from giving somebody an undeserved "blowing up."

Never Without a Market.—An old fruit grower says: "My experience and observation have taught me that to overstock the market with fruit of good quality and in good shape, is a thing almost impossible. The more there is raised the more there will be consumed, the world over."

PUT YOUR TRUST IN THE OLD SORTS.

The old and long tried varieties of trees and vines are the safest and best, as a usual thing, and the common run of fruit-growers will have better success if they will confine themselves to this list, and not permit themselves to be led astray by the passion for something new. Novelties are well enough in their way, but they are out of place except with men who are especially well qualified and favorably situated for making experiments. But the mass of fruit-growers do not need any novelties. What they want is tested varieties which it is known will not disappoint the grower if they are given anything approaching to a fair chance. It is a stange fancy which impels people to seek something new in this line before they have mastered enough of the mysteries of horticulture to win more than tolerable success with the hardiest and most thoroughly tested kinds. This has been the means of furnishing the fruit-tree shark with some of his richest harvests. He understands the hankering so many people have for novelties, and he always has one on hand of captivating name and proportions.

The ordinary fruit-grower cannot afford to make many experiments on a scale which would entail upon him considerable loss in case the results should be different from what he had hoped for and expected. He had better leave such work as that to people who are much better fitted for doing it than he. The experiment stations and the horticultural societies exist for that purpose, and they can be trusted to faithfully inquire into the value of any novelty which promises to be an important addition to the list of fruits.

Any really trustworthy nurseryman whose advice is sought by a customer regarding the varieties of trees to plant if they are to be exposed to this trying northern climate, will urge the adoption of a very short list. And it will be composed of varieties of unquestionable hardiness. He will oppose anything in the way of experiment. He may allow a purchase which his judgment condemns, on the understanding that it is an experiment, and is not to be regarded in any other light. But he will advise his customers to leave all costly experimenting to those who have superior advantages for doing that kind of work, and to keep within the limits of a short list of well tested varieties. This is good counsel, and it will be the better for the customers if they so regard it, and govern themselves accordingly.

THE THIEVING BIRDS.

It is an important question with fruit growers how they are to save the cherries and small fruits from the birds. Most growers are willing that the birds should have a reasonable share of the crop in return for the good which they are supposed to do by the destruction of the insects which work injury to the trees and plants. But in many instances if the birds are allowed the freedom of the grounds they will not leave enough of the crop to make it worth the while of the owner to gather it. How to protect themselves from such wholesale robbery as this without waging a war of extermination upon the birds, is a problem which a large proportion of fruit-growers are finding it hard to solve. Some advise planting the Russian mulberry somewhat freely, claiming that the birds prefer this fruit to the berries, and will devote their attention almost wholly to it during the ripening season. But the trouble is that late frosts often overtake the Russian mulberries, and the trees do not bear. Mr. Geo. Van Houten, a name familiar to all western fruit-growers, recommends the planting of the Tartarian honeysuckle. With him this has proved an effective protection against the depradations of the robins and catbirds. These plants never fail to bear an abundant crop of berries which have a greater attraction for the birds than any of the fruits which are valuable to the owner.

It is certain that whatever protection fruit-growers decide to give themselves from the birds, it will be in accordance with some such plan as this. Very few of them will ever consent to engage in a general slaughter of the birds in order to save their fruit. It is the common belief that the birds have been given more credit than belongs to them for alleged valuable services rendered to the owners of fruit bearing trees and vines. If charged with the damage they inflict it is doubtful if there would be very much of a balance in their favor. But however this may be, most fruit-growers will endure the injury they do with as much patience as they can until some better means of protection is found than by their destruction.

Not a Hardy Crab.—Tree agents have been offering apple trees budded on French crab roots. The idea is entertained by many people that the crabs are all hardy. The best known sorts are hardy, but the French crab is not any more so than the peach.

Send the MESSENGER to a friend.

WHEN TO PRUNE.

It used to be the accepted doctrine among horticulturists that the proper time to prune fruit trees was in the spring when the leaves are about half formed. It is still the general practice to do the pruning at this time, and those who do so are backed by the high authority of the State Horticultural Society. But there are fruit growers in the state whose opinions are entitled to respect who have lately expressed the belief that the fall is a better time to prune than the spring, especially if limbs of considerable size are to be cut from the trees. These men have noticed that where such cutting has been done in November the stub is thoroughly hardened up by spring, and no sign of decay appears at the point where the limb was severed. The removal of large sized limbs from a fruit tree in the spring is always attended with considerable risk, as every orchard owner well knows. The men who have observed that this may be done in the fall without hazard think that the advice to prune in the spring should be taken with some allowance, no matter how authoratative the source from which it comes. The recommendations of the State Horticultural Society can ordinarily be followed with entire safety, but such recommendations must as a usual thing be general in their character, and subject to some exceptions. And besides, this society does not aim to lay down arbitrary rules which would discourage future investigation and discovery on the part of its members.

A Useful Machine.—Some genius has invented a machine for setting strawberry plants, and every grower who has tested it admits that it does its work perfectly. It is drawn by horse power and requires two men to operate it besides the driver. It sets the plant and waters it from a tank which it carries, and does the work better and faster than double the number of men could do which it takes to handle it. The machine is equally as convenient for setting out cabbage and beet plants

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They All Do It.—Probably half of those who have made a life work of horticulture have some time or other pinned considerable faith to seedling fruit trees. It seems to be a kind of disease which nearly all fruit-growers must wrestle with at some period of their lives. But they all get well over it in the course of time.

Many successful fruit growers contend that clean cultivation is the best mulch for all kinds of small fruit.

SPRING OR FALL PLANTING.

The spring is the proper time to set out fruit trees in this northern climate. People are occasionally to be met with who contend that fall planting is the best, claiming to have arrived at this conclusion as the result of a series of carefully conducted experiments. Notwithstanding this, those who have had little or no experience in fruit-culture, and are looking for safe counsel on this subject, will make no mistake if they set out their trees in the spring. An inconsiderable number of people may have had moderate success with fall planted trees, but the results have been discouraging to the most of those who have tried it. Spring planting is practiced by old and experienced growers almost without exception. Nearly all the best orchards in existence were planted in the spring, and it is a rare occurrence for a man of any prominence in the horticultural world to get up in a meeting of any of the societies and advocate the opposite practice. It is looked upon by growers of this class as a question which hardly admits of any farther discussion. There is no disagreement, to speak of, on this subject between horticulturists of the best class.

In view of these facts it seems like presumption for a man who knows no more about fruit-growing than it is possible for one to learn who is engaged in general farming, or who follows any other employment which engrosses the larger share of his time and attention, to contend that it is better to set out orchard trees in the fall than in the spring. And yet it is not an uncommon thing to meet with people of this description who are very confident that they have discovered the cause of most of the failures in orchard growing in the general practice of spring planting.

An array of authorities could be quoted on this subject which should remove all doubt from the mind of the ordinary fruit-grower respecting the fact that spring is the proper time to set out fruit trees in this northwest territory. Their reasons for holding to these views could also be quoted, but it is a large subject, and would call for an article of considerable length to present them in anything like a complete form. It should be enough to satisfy the common run of orchard owners, men who are in want of reliable information on this point, that those who have had the best opportunities for becoming correctly informed on the subject are practically a unit in advising spring planting.

The MESSENGER is only 50 cts a year

PARKER EARLE STRAWBERRY.

Owing to the extremely dry weather last season strawberries in this part of the west were almost an entire failure, and it was a very unfavorable time for trying to arrive at correct conclusions concerning the merits of varieties new to the locality. Several persons were experimenting with the Parker Earle, and though it bore no fruit, all these persons formed a very favorable opinion of it. The plants were literally loaded with half developed berries, and gave unmistakable evidence of the fact that the crop would have been abundant if there had been moisture enough in the soil to mature it. In most instances other varieties of strawberries were growing alongside of the Parker Earle, and as a rule they were the sorts which had been most popular heretofore, but they scarcely made any attempt to form berries. The inference to be drawn from this is that the Parker Earle would produce a fairly good crop under conditions of drouth which would lead to a total failure with many other heretofore popular kinds. It is well understood that in making up an estimate of a new variety of fruit it is not wise to trust too confidently to the experience of one season, but we have stated what came under our observation with a view to encouraging farther experimentation with a kind which we believe will prove of much value to strawberry growers of this locality.

A COMMON OCCURRENCE.

The followlng extract is from a paper read at a meeting of the State Horticultural Society by Edward Hoyt, of Scotch Grove. It shows how much more willing people are to patronize a stranger, and take all the chances of being defrauded, than to do business with one of their own neighbors who would deal with them in an honest manner:

"Last year a nurseryman in my district sent his catalogue of plants and price list to every farmer and merchant in Jones county. He offerred strawberry plants at 75 cents per 100, blackberry plants at 70 cents per 100, roses at $1.25 to $2.00 per dozen. Yet with this liberal offer before them, many people were induced to pay a dealer who procured his stock from this same aforesaid nurseryman, $6.00 for two dozen strawberry plants, $6.00 for six blackberry roots, and $3.00 for two climbing roses, thus giving this irresponsible agent a profit of over 500 per cent on his small outlay. Do we need any legislation to prevent such swindling? I believe we had better legislate some sense into the people who patronize such dealers."

WHERE PROTECTION IS AN INJURY.

It is now regarded as a settled fact that it is a positive injury to an orchard to surround it with a thick belt of trees. Hundreds of orchards have been killed by that kind of mistaken kindness. A few rows of trees on the south may be of some advantage, but even the wisdom of this is questioned by some of the authorities. It is generally agreed, however, that there should be nothing of the sort on the north.

In the early settlement of the country it was the most natural thing in the world for the people to conceive the idea that the young orchard needed shelter from the cold winds of the north and west. They regarded the climate as at best almost too severe for successful fruit-growing, and supposed if they could temper it somewhat by such means as these their prospects of obtaining fruit from the trees would be materially improved. But the planting of these groves was all misspent labor insofar as the intent was to give protection to the trees. The winters of a few years ago which proved so destructive to fruit trees throughout the northwest, wrought far greater havoc to these protected orchards than to those which stood out in the open where they were fully exposed to the sweep of the winds.

Nothing has been more clearly demonstrated than that these belts of timber around an orchard are an injury to it. Where such groves were planted years ago, and cannot be removed without taking away the windbreak from the farm buildings, they must be allowed to remain, of course. But the owner should loose no time in getting a new orchard started outside of the barricade, as the first will most likely be a disappointment to him about the time when it should be making some return for the labor and expense which it has cost to grow it.

Profitable Winter Work.—There is one kind of work which can be done on the fruit farm in mid-winter just as well as in summer. We refer, of course, to head work. It takes considerable of that kind of work to run a fruit farm successfully, and the bulk of it is best done during the leisure days of winter.

Plant cherry trees early, before the the buds begin to swell, if it is a possible thing. Experience has demonstrated that, other things being equal, the early planted trees do the best.

SUN SCALD.

The reader may have noticed that the trees in many of the orchards in this northwestern country show a decided inclination to lean to the northeast. If he has given much attention to orcharding this fact has surely not escaped his observation. He has noticed, too, that the trees which thus vary from the upright position are as a general thing injured along the southwest side by what is known among horticulturists as sun scald. This sun scald has caused the death of more fruit trees than all the blizzards which have raged over these prairies. What it is that causes the trees to thus incline their tops to the northeast is a mystery. Nobody can give a satisfactory explanation of it. The hardiest varieties, such as the Oldenburg, Hibernal, and others, show less of a disposition to do this than the more tender sorts. They are, therefore, less subject to sun scald, and no doubt owe their hardiness in a great measure to their powers of resistance to the influences which draw the others from the perpendicular.

Trees which lean in this way are as a rule short lived, as it seems next to impossible for them to escape sun scald. It is true that a specimen is sometimes seen which will manage to keep alive and bear fruit for years after it has been badly injured in this way, but in most cases the tree either perishes or becomes a worthless stock from the time that the injury is produced.

Various expedients have been proposed for preventing the loss of trees from this cause, such as protecting the trunks on the side next to the two o'clock sun with boards nailed together trough shaped, or pieces of bark taken from timber trees. Some advise the planting of an evergreen on the south side of each tree. All of these are well enough in their way, and perhaps any of them will answer the end for which they are suggested, that of sufficiently shielding the trunks from the hot rays of the sun to do away with the danger of such injury as has been described.

But the difficulty is that only those who make a business of fruit-growing will go to the trouble to protect their trees in any of the ways which have been named. Those who want an easier way of doing this will find that by leaning the trees well towards the southwest when planting them, they will thereby save the most of them from sun scald. This is not so effective as shading the trunks with boards or bark, but it is infinitely better than no protection at all.

DECEPTIVE PROMISES.

In buying fruit trees it is not always the safest plan to do business with the firm which makes the best promises. Some of them will promise almost anything in order to effect sales, if we are to believe those who claim to be in their employ. A nursery which is carried on in a legitimate way will not make any promises which it cannot honestly fulfill and at the same time do business at a profit.

Anyone of good judgment ought to be able to form something like a correct idea of the proportion of the risk a nurseryman may safely share with his customer in relation to the growth of the trees which he sells to him. When he agrees to replace at half price all which die, it seems like that is about all that he can do, always assuming that he is furnishing his trade with standard goods at the ruling prices. When he does this much he makes himself responsible in a great measure for the carelessness and neglect of his patron, if he happens to be that kind of a person; but the system also compels the patron to assume a part of the penalty of such neglect. It prevents an unscrupulous purchaser from imposing upon the seller without putting expense upon himself. This is the limit to which the nurseryman should be expected to go, and we would not care to deal with a firm which promised anything more than this. We would mistrust the value of a guarantee which obligated the seller to do business at a loss.

PLANT THE ORCHARD TO CORN.

During the past summer the writer visited a number of orchards which were set out the previous spring and the space between the rows planted to corn. Notwithstanding the dry weather these orchards went through the summer in excellent condition. Taken as a whole, the percentage of loss was but little in excess of what might be expected in a season of average rainfall. In one planting of fifty trees there was no loss at all. By way of comparison the condition of other orchards was noted which were planted at the same time, but the ground between the rows was occupied by a crop of oats instead of corn. The loss was quite considerable in all of these plantings, and in at least two instances so many of the trees died that the attempt to start an orchard might be called a total failure. In all cases the trees which stood in the midst of corn were in better shape, and so continued till the end of the season, than those in the fields of oats. There was no exception to this. After making fair allowance for difference in the lay of ground, and duly considering all attendant circumstances which could make to the advantage of the one case more than the other, there seems to be no escape from the conclusion that corn is the proper crop to put in the newly planted orchard. This is what is advised, too, by nearly all experienced fruit-growers, but many of us are liable to suppose that the character of the crop is not of as much importance as it really is.

EVERGREENS.

Those experienced in the handling of evergreens say that an exposure of the roots to the sun for one minute is sufficient to kill a tree of this kind. The resinous substance about the roots of all evergreens is perfectly insoluble in the ground after it has been hardened by exposure to the sun or winds. The tree is then in about the same plight as if it had been painted, and its chances of growing are just about as good in the one case as the other. It is contended that there is no more difficulty in getting an evergreen to grow than an apple tree or cottonwood, provided care has been taken to prevent drying of the roots. Indeed we are told that they can be transplanted with less risk than any other trees if they are only guarded from the danger here referred to. Many people do not hesitate to plant evergreens in the middle of the summer, if it suits their convenience, and the trees do not appear to be any more affected by the change than if planted in the spring. The fact is that most of the evergreens which fail to grow after being transplanted, have been killed by exposure of the roots before they were set in the ground.

A Clipping.—The oldest apple tree in America came over in the Mayflower. It was transplanted in the town of York, in Maine, and bore fruit continuously for two hundred and forty-four years. A piece of the wood of that apple tree is yet in the possession of Professor L. R. Witherell, of Davenport.

Not Worth Repairing.—When half the trees of a bearing orchard have been killed, it is a bad plan to try to restore it by filling in the vacant places with young trees. The young trees need cultivation and other attentions which cannot well be given them when mixed in with the older ones. It is always safer under such circumstances to start a new orchard than to try to renew an old and partially destroyed one in this way.

Brief Mention.

The Snyder blackberry has done best in this part of the west.

A southwest slope is the very worst location which could be chosen for an apple orchard.

R. A. Lewis, of Cherokee, expresses the belief that more fruit trees die from deep than from shallow planting.

It does not take near the labor to raise a crop of grapes in Iowa that it does to raise a crop of corn. And the grapes are just as sure a crop as the corn.

The black raspberries should be kept in hills, and every spring the old wood should be cut out and burned, and the new growth trimmed back to about three feet.

Strawberries can be grown on any soil which is strong enough to produce a crop of any kind. But the berries will be all the better for making the ground moderately rich.

Two hundred and twenty-five bushels of strawberries to the acre have been grown in northwestern Iowa, and this too by men who had been but a short time in the fruit business.

The Japanese Wineberry, which has been advertised as something of great value, is referred to by those who claim to have given it a fair trial, as a small, inferior raspberry with a husk.

Large grape growers figure it out that it pays to cover the vines though the fruit does not sell for more than two cents a pound. It costs about fifteen dollars to cover an acre of vines.

None of the roses are hardy in this part of the north in the sense of being able to pass through the winter unharmed if fully exposed. When hardy roses are spoken of it is meant that they are hardy if protected.

Every farm should be provided with at least an acre of apple trees. Planted the usual distance apart, this would make about seventy trees, enough to supply the largest family with all the fruit that it needed.

It will do no harm, at least, to scatter coal ashes about some of the young fruit-trees. It is the opinion of some that they are better than a mulch of straw or manure. The writer can see a decided difference between cherry trees which were treated this way three years ago over those which were mulched in the ordinary fashion. But it is too early yet to recommend the method except as an experiment.

I am satisfied that more and higher colored fruit can be raised in an orchard whose trees are thirty feet apart than in one where the distance is but fifteen feet between the trees.—A. G. Sabin.

The Bokara peach No. 3 has stood a temperature of thirty-four degrees below zero in Iowa, and produced a partial crop of berries the following season. It is believed that it will pay to cultivate this peach in southern Iowa.

The jays are said to destroy many of the smaller birds more desirable than themselves, and do much harm to the fruit-grower in other ways. Many growers make it a rule to kill a jay whenever the opportunity offers.

It is said that a good rule to follow in transplanting apple trees is to place them one-half inch deeper than they grew in the nursery row for every foot which they measure in hight. Thus a tree six feet high should be planted three inches deeper than it stood in the nursery.

The people who read the state horticultural reports have nothing to fear from the visits of the swindling tree peddler. They are not the kind of people that he can turn to his use. But it is estimated that not more than one person in five hundred reads these reports.

There is not one man in fifty who will succeed with fall planting. It is entirely erroneous to recommend it for any of this western country. Our climate is so dry and intensely cold that it is only an occasional year that it will succeed. If the practice of fall planting is adopted it can only result in failure.—C. G. Patten.

There is a cheap netting which is extensively used in Europe for covering valuable fruits as a defense against the birds. This netting is made of stout flax threads, and soaked in a strong astringent liquid to add to its durability. It is sold for one cent a square yard where it is made. It is something of a mystery why it has not come into more common use in this country.

The Shaffer raspberry has come to be regarded as one of the best varieties to plant in northern Iowa and Minnesota. Owing to its habit of rooting near the surface, it is not fitted for enduring drouth so well as some other varieties, but it rarely fails to produce a crop. One grower reports that after a severe winter it produced a better crop without protection than the old favorite, the Cuthbert, did with protection.

Some of Iowa's most successful grape growers advise the planting of one-year-old vines every time. They claim that if the vines are left until two years old there are not enough roots taken up to balance the top.

It estimated that it costs five cents a tree to spray an orchard of ordinary size. This expense, we are told, could be reduced one half if a considerable number of fruit-growers would unite in the purchase of the apparatus and material, and have it operated by men who had become expert in its use.

It is contended by some fruit-growers that blackberries and raspberries will not dry out on the bushes even during our most droughty seasons, if the ground is properly cultivated twice a week while the berries are forming. Care must be taken, however, not to disturb the roots of the plants with the cultivator.

The Chickasaw plum does not appear to be a success in this locality. A number of finely appearing groves are to be seen, but they bear no fruit. These groves were planted by former Illinois people who remembered that the Chickasaw was regarded as one of the best varieties at their old home in that state.

Of new things Parker Earle Strawberry, Anisim apple, and Kenyon raspberry command attention, and will certainly be heard from later. The Anisim is the best grower in the nursery of the Russians I have tested, and better than any variety on my place. It is so far absolutely blight-proof with me.—M. E. Hinkley.

Let no one set out a fruit tree until he has seen the various stratas of soils which underlie the site designed for an orchard. Let him know, too, that the subsoil is of far greater importance than the surface soil. The surface is of little conseqeunce as compared with the third, fourth and fifth feet of subsoil.—Edson Gaylord.

Root grafting, in my opinion, is the only way a reliable tree can be grown. I don't care if the pieces of roots are no more than two or two and a half inches long. I use long scions, and expect to get roots from the scions, when if of hardy kinds, the tree will be hardy, regardless of the original root. The agent will tell the farmer that a tree to be hardy must be grown from a whole root; that without a tap root a tree cannot be hardy. But while this is a very nice theory it is not true, as in any kind of nursery work it is almost impossible to preserve the tap root.—Silas Wilson.

Chicken Cholera!

I have a sure, tried proved and guaranteed cure for **Hog and Chicken Cholera**, which has stood the test for seven years, without failure, that I know of, but has effected thousands of cures. I have sold over 4,000 recipes and family rights in eight months, and not a single complaint received yet. I sold each and every one on a guarantee, and I still sell that way. If Holland Cholera Cure and Preventive fails to cure or prevent Cholera I will refund your money. This is fair enough. Six pounds of the medicine can be made at a total cost of from $1 to $1.25, enough to do 50 hogs and 100 chickens a year. If you will try this remedy I assure you you will never regret it. Use it and your hogs and chickens will look better and healthier than ever before. Recipe and family right only **$1**. Ready prepared medicines **50** cents and **$1** per bottle or package. "Procrastination is the thief of time," so order NOW. Reference: My Postmaster, Express Agent, the editor of the Cowarts "Enterprise," the leading paper in the county, or any business house or good citizen in this town.

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A FEW TESTIMONIALS.

Dallas, Texas, April 13th, 1893.

Mrs. Rachel V. Thomas—Dear Madam:—I have thoroughly tested your cholera remedy and find it O. K. It's grand. I enclose $10.00. Will try the agency. Please send at once and oblige

Very Respectfully, H. W. HARPER.

—

Dallas, Texas, May 19th, 1893.

Have sold out. I enclose $50.00 for which send me all the recipes you can and the rights to the counties named below. I never saw anything sell so fast. What is the least you will take for the State? If your price is reasonable will take the State.

Very Respectfully, H. W. HARPER.

(I have not room for all his letters. He took the State. Here is one more of his letters:)

Dallas, Texas, July 17th, 1893.

Mrs. Rachel V. Thomas—Dear Madam: Since taking the State right I canvassed three weeks and made $987.00 selling recipes and territory. I will start several sub-agents next week. Could I exchange a portion of Texas for a portion of Kansas?

Very Respectfully, H. W. HARPER.

—

Millen, Ga., Dec., 14th, 1893.

Mrs. Thomas: I write a letter of inquiry. How much of this State is unsold? I want balance of the State. Holland's Cholera Cure is just what it is represented to be. It has proved a blessing to farmers of this county.

Very Respectfully,
C. O. EDENFIELD.
Agent for Screven county.

—

Rock Bridge, Ohio, Dec., 4th, 1893.

Mrs. Thomas: Recipe came to hand and it's all O. K. Enclosed find $30.00 for Hocking, Pickaway and Fairfield counties. What will you take for the State? Yours Truly,

P. HANSTEIN.

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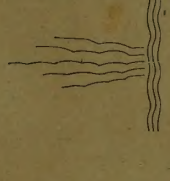
I have thousands more testimonials. I guarantee Holland's Cholera Cure and Preventive to cure and prevent hog and chicken cholera, in each and every case or refund the money. This is fair enough. Don't postpone ordering because you may not at present be bothered with the cholera. The idea is to prevent in time and to keep your hogs and chickens in a good healthy condition. This my remedy will do. General and local agents wanted. State and county rights for sale or trade. Write at once. Address

Mrs. Rachel V. Thomas.
COWARTS, ALA.



Hog Cholera!